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UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

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REPLY TO: 3420

DATE: April 4, 1988

SUBJECT: Biological Evaluation of the Bluff Creek Area
Orleans Ranger District (Report No. 88-5)

TO: Forest Supervisor, Six Rivers National Forest

Following is a request from Tom Bouse; Orleans Ranger District, Gregg DeNitto and John Kliejunas; plant pathologists, Forest Pest Management, visited with him to discuss a disease situation in a timber stand in the Bluff Creek area. This stand had been previously visited by DeNitto and Kliejunas on separate occasions (see enclosed reports). At those times; they confirmed the observations of Bouse, who had recognized damage by a root disease to the Douglas-fir. The cause was identified as black stain root disease. Stand description, management objectives, and constraints are discussed in the previous reports.

Tom is considering re-evaluating this area for harvesting in association with nearby planned helicopter timber sales. One alternative is to harvest the lower 25-acre unit and regenerate. He wanted recent information on the disease, the effects such activities may have on the stand and surrounding stands, and the benefits and risks of the proposed activities as far as pest incidence. Specific questions included the following. What effect would logging the stand have on the incidence of disease in surrounding stands because of a possible increase in vectors? How effective would a buffer be around existing disease centers in limiting further damage? What are acceptable species for planting?

The available knowledge on black stain root disease that would affect management activities in the Bluff Creek situation has not increased significantly since the last reports. Information gained about possible insect vectors raises some questions on the effect of harvesting on the future incidence of root disease in surrounding stands. We do not know what effects such actions may have on the population dynamics of the insects, nor on their capability to leave the area and spread the disease to trees in surrounding stands. Because the disease is apparently not active in the surrounding stands, site characteristics may differ enough to lessen the probability of new disease occurrence. By not taking any actions in the surrounding stands during and for several years (5?) after harvesting that would result in soil disturbance, the probability of disease occurrence may also be reduced because of the link between black stain root disease and site disturbance. Future damage from the disease may not be increased substantially as a result of potential activities, such as helicopter logging, which cause little soil disturbance. Activities which limit site disturbance may reduce the incidence of new disease centers.

As far as buffers around existing centers, we do not know if insect vectors might attack these uninfected stumps and spread the disease beyond the buffer. Because of the amount of disease in the stand, it might be just as advantageous if any action is taken to clearcut the unit and regenerate it with non-susceptible species. This assumes other management constraints and objectives would be met.

Potential species to regenerate include any species suitable to the site other than Douglas-fir. The longevity of the fungus on a site is not known, but is believed to be at least 3 years. Any Douglas-fir that regenerated in the early years of the new plantation would be susceptible to infection by the fungus existing on the site.

Additional questions about this situation may be addressed to Gregg DeNitto or John Kliejunas at 415-556-6520.

BRIAN T. STURGESS

JOHN NEISESS
Program Leader for
Forest Pest Management

GDeNitto:jmw GD 4/4/88

cc: District Ranger, Orleans RD
Tom Bouse, Orleans RD
George Lottritz, Six Rivers NF

Staff 4/6/88 JNW

Enclosures